



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,883	04/26/2000	Michael Freed	99,918	1786

20306 7590 12/22/2006
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 S. WACKER DRIVE
32ND FLOOR
CHICAGO, IL 60606

EXAMINER

JACOBS, LASHONDA T

ART UNIT	PAPER NUMBER
----------	--------------

2157

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/22/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/559,883

Applicant(s)

FREED ET AL.

Examiner

LaShonda T. Jacobs

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on October 16, 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This is a Final Office Action in response to Applicant's Amendment filed on October 16, 2006.

Claims 1, 11, 22 and 25 have been amended. Claims 1-8 and 10-29 are presented for further examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 and 10-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsay (U.S. Pat. No. 6,564,267) in view of Matsuzono (U.S. Pat. No. 5,809,254).

As per claim 1, Lindsay discloses a method for changing a maximum segment size for a connection between a data source and a data receiver on a network comprising the steps of:

- receiving an announcement from said data receiver of a first connection between said source and said data receiver, wherein said announcement denotes a maximum segment size (abstract, col. 2, lines 24-40 and col. 5, lines 57-64); and
- generating an altered announcement by changing said maximum segment size in said announcement of said first connection to a determined maximum segment size (col. 6, lines 45-65).
- wherein the determined maximum segment size reduces message fragmentation (col. 5, lines 49-64).

Art Unit: 2157

However, Lindsay does not explicitly disclose:

- sending subsequent messages from the data source to the data receiver using the determined maximum segment size.

Matsuzono discloses a data communication mechanism capable of producing data packet having an optimal segment size in communication system comprising:

- sending subsequent messages from the data source to the data receiver using the determined maximum segment size (abstract, col. 2, lines 45-67, col. 3, lines 1-5 and lines 34-48).

Given the teaching of Matsuzono, it would have been obvious to one of ordinary skill in the art to modify Mulligan by including an optimal segment size determinator to determine the maximum segment size for the data transmission in order to reduce message fragmentation.

As per claim 2, Lindsay further discloses:

- recalculating a checksum of said announcement for use in the altered announcement (col. 6, lines 34-55).

As per claim 3, Lindsay discloses:

- wherein said announcement comprises a first message of a data stream in said connection (abstract, col. 2, lines 24-40 and col. 5, lines 57-64).

As per claim 6, Lindsay discloses:

- wherein changing said maximum segment size comprises changing said maximum segment size in a TCP header in said announcement (col. 5, lines 49-64).

As per claim 7, Lindsay discloses:

Art Unit: 2157

- wherein said determined maximum segment size is preprogrammed into a database (col. 8, lines 46-58).

As per claim 10, Mulligan discloses:

- wherein said determined maximum segment size avoid re-assembly of fragments (abstract, col. 2, lines 24-40 and col. 5, lines 57-64).

As per claim 11, Lindsay discloses a method of reducing message fragmentation for a connection between a data source and a data receiver on a network comprising the steps of:

- receiving a first message fragment of a first connection between said data source and said data receiver (col. 6, lines 8-19); and
- storing a maximum segment size of said first message fragment of said first connection, wherein said maximum segment size exists in accordance with said first message fragment (abstract, col. 2, lines 24-40 and col. 5, lines 57-64);
- resetting said first connection, wherein resetting said first connection initiates a second connection (col. 8, lines 46-57); and
- receiving an announcement of said second connection (col. 8, lines 46-57) ;
- generating an altered announcement of said second connection by placing said maximum segment size into an announcement of said second connection col. 6, lines 45-65).

However, Lindsay does not explicitly disclose:

- in which messages are sent from the data source to the data receiver with reduced message fragmentation.

Art Unit: 2157

Matsuzono discloses a data communication mechanism capable of producing data packet having an optimal segment size in communication system comprising:

- in which messages are sent from the data source to the data receiver with reduced message fragmentation (abstract, col. 2, lines 45-67, col. 3, lines 1-5 and lines 34-48).

Given the teaching of Matsuzono, it would have been obvious to one of ordinary skill in the art to modify Mulligan by including an optimal segment size determinator to determine the maximum segment size for the data transmission in order to reduce message fragmentation.

As per claim **12**, Lindsay further discloses:

- recalculating a checksum of said announcement of said second connection (col. 6, lines 34-55).

As per claim **13**, Lindsay discloses:

- wherein said first message fragment comprises a first message of a data stream in said connection (abstract, col. 2, lines 24-40 and col. 5, lines 57-64).

As per claims **4** and **14**, Lindsay discloses:

- wherein said announcement comprises a set SYN bit (col. 5, lines 57-64).

As per claims **5** and **15**, Lindsay discloses:

- wherein said first connection is one of any virtual connections utilizing TCP/IP between said data source and said data receiver (col. 6, lines 8-13).

As per claims **8** and **21**, Lindsay discloses:

- wherein said data source comprises customer premise equipment, and wherein data receiver comprises customer premise equipment (col. 4, lines 55-61).

As per claim **16**, Lindsay discloses:

Art Unit: 2157

- wherein said second connection is a connection following said first connection (col. 8, lines 46-58).

As per claim 17, Lindsay discloses:

- wherein storing said maximum segment size comprises storing said maximum segment size in a database (col. 11, lines 25-36).

As per claim 18, Mulligan discloses:

- wherein resetting said first connection comprises closing said first connection by setting a RST bit (col. 8, lines 46-57).

As per claim 19, Lindsay discloses:

- wherein resetting said first connection initiates said second connection (col. 8, lines 46-57).

As per claim 20, Lindsay discloses:

- wherein placing said maximum segment message size into said announcement of said second connection comprises placing said maximum segment message into a TCP header within said announcement of said second connection (col. 5, lines 57-64).

As per claim 22, Lindsay discloses a method of reducing message fragmentation between the data source and the data receiver connected by a network comprising the steps of:

- intercepting a first announcement of a first connection between said data source and said data receiver (col. 2, lines 24-40); and
- predicting predicted maximum segment size of said first connection, wherein said predicted maximum segment size is placed in a signal (col. 5, lines 41-56);

Art Unit: 2157

- sending said signal with a no-fragment option set to said data source and said data receiver (col. 5, lines 41-56);
- storing a determined maximum segment size, whereupon said determined maximum segment size results from a fragment free signal response (col. 5, lines 56-64); and
- receiving subsequent announcements of connections and inserting said determined maximum segment into said subsequent announcements of connections between said data source and said data receiver (col. 11, lines 5-24).

However, Lindsay does not explicitly disclose:

- sending subsequent messages from the data source to the data receiver using the determined maximum segment size wherein the determined maximum segment size reduces message fragmentation.

Matsuzono discloses a data communication mechanism capable of producing data packet having an optimal segment size in communication system comprising:

- sending subsequent messages from the data source to the data receiver using the determined maximum segment size wherein the determined maximum segment size reduces message fragmentation (abstract, col. 2, lines 45-67, col. 3, lines 1-5 and lines 34-48).

Given the teaching of Matsuzono, it would have been obvious to one of ordinary skill in the art to modify Mulligan by including an optimal segment size determinator to determine the maximum segment size for the data transmission in order to reduce message fragmentation.

As per claim **23**, Lindsay discloses:

Art Unit: 2157

- wherein said determined maximum segment size is iteratively predicted until a fragment free signal response is received (col. 8, lines 46-52 and col. 9, lines 7-21).

As per claim **24**, Lindsay discloses:

- wherein said no-fragment option is set in an IP header within said signal (col. 5, lines 41-56).

As per claim **25**, Lindsay discloses an apparatus for reducing message fragmentation between a data source and a data receiver connected by a network comprising:

- a network device connected to the network, wherein said communications denote a maximum segment size for the network, wherein said network device changes the maximum segment size to a determined maximum segment size that is to be used in data transmission between said data source and said data receiver (col. 5, lines 48-64 and col. 6, lines 8-19); and
- a storage device connected to said network device for storing said determined maximum segment size for data transmitted between said data source and said data receiver; wherein said network device stores said determined maximum segment sizes in accordance to data communication between said data source and data receiver (col. 5, lines 48-64 and col. 6, lines 8-19).

However, Lindsay does not explicitly disclose:

- determined maximum segment size that provides a reduction of message fragmentation.

Matsuzono discloses a data communication mechanism capable of producing data packet having an optimal segment size in communication system comprising:

Art Unit: 2157

- determined maximum segment size that provides a reduction of message fragmentation (abstract, col. 2, lines 45-67, col. 3, lines 1-5 and lines 34-48).

Given the teaching of Matsuzono, it would have been obvious to one of ordinary skill in the art to modify Mulligan by including an optimal segment size determinator to determine the maximum segment size for the data transmission in order to reduce message fragmentation.

As per claim **26**, Lindsay discloses:

- wherein said announcement comprises a first message (abstract, col. 2, lines 24-40 and col. 5, lines 57-64); and
- wherein said first message comprises a set SYN bit (col. 5, lines 57-64).

As per claim **27**, Lindsay discloses:

- wherein the network device iteratively predicts said determined maximum segment size (col. 5, lines 41-56).

As per claim **28**, Lindsay discloses:

- wherein said storage device comprises a database (col. 8, lines 46-58).

As per claim **29**, Lindsay discloses:

- wherein said network device comprises a gateway device (col. 4, lines 55-65).

Response to Arguments

3. Applicant's arguments with respect to claims **1-8** and **10-29** have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShonda T. Jacobs whose telephone number is 571-272-4004. The examiner can normally be reached on 8:30 A.M.-5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2157

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LaShonda T Jacobs
Examiner
Art Unit 2157

ltj
December 18, 2006



ARDA/THEME
EXAMINER